

1 We claim:

2 1. A dual-purpose magnetic-tape cartridge for alternative use in
3 Magstar or LTO automated picker systems, comprising:

4 a magnetic-tape cartridge having a top side, a bottom side, a
5 front side, a rear side, two lateral sides, and a sloped face in
6 the rear side conforming to Magstar format specifications;

7 wherein a rear portion of each lateral side contains a
8 recessed surface offset by about 1.8 mm therefrom and extending
9 forward from said rear side; and said recessed surface further
10 contains a gripping notch at least 4.75 mm deep, extending at least
11 8.70 mm in height from said bottom side, and extending about 6.00
12 mm in width from approximately 14 mm to approximately 20 mm from
13 said rear side of the cartridge.

14 2. The cartridge of Claim 1, wherein said sloped face does not
15 extend to said lateral sides of the cartridge.

16 3. The cartridge of Claim 2, wherein said sloped face extends at
17 least 67 mm.

18 4. The cartridge of Claim 2, further comprising a beveled corner
19 surface connecting said rear side to each of said lateral sides.

1 5. The cartridge of Claim 1, further comprising a leader block
2 assembly incorporated within an opening located between said left
3 and front sides of the cartridge.

4 6. The cartridge of Claim 1, further comprising a leader pin
5 assembly incorporated within an opening located between said left
6 and front sides of the cartridge.

7 7. The cartridge of Claim 2, further comprising a leader block
8 assembly incorporated within an opening located between said left
9 and front sides of the cartridge.

10 8. The cartridge of Claim 2, further comprising a leader pin
11 assembly incorporated within an opening located between said left
12 and front sides of the cartridge.

13 9. The cartridge of Claim 4, further comprising a leader block
14 assembly incorporated within an opening located between said left
15 and front sides of the cartridge.

16 10. The cartridge of Claim 4, further comprising a leader pin
17 assembly incorporated within an opening located between said left
18 and front sides of the cartridge.

1 11. A dual-purpose magnetic-tape cartridge for alternative use in
2 Magstar or LTO robotic systems, comprising:

3 a magnetic-tape cartridge having a top side, a bottom side, a
4 front side, a rear side, two lateral sides, and a sloped face in
5 the rear side conforming to Magstar format specifications;

6 wherein said bottom side contains first and second locating
7 notches for engagement with corresponding locating pins in a drive
8 and a V-shaped notch for initial alignment of the cartridge within
9 the drive;

10 wherein said first locating notch is an approximately square
11 hole at least 5 mm deep and with a side of $3.00 \text{ mm} \pm 0.08 \text{ mm}$, and
12 said hole has a center located $20.50 \text{ mm} \pm 0.20 \text{ mm}$ from said front
13 side of the cartridge;

14 wherein said second locating notch is an approximately oval
15 aperture at least 5 mm deep, with a major dimension of at least 4.8
16 mm parallel to the cartridge's front side and a minor dimension of
17 $3.00 \text{ mm} \pm 0.08 \text{ mm}$, and said aperture has a center $20.50 \text{ mm} \pm 0.20$
18 mm from the front side of the cartridge and $86.15 \text{ mm} \pm 0.25 \text{ mm}$ from
19 the center of the first locating notch;

20 and wherein said V-shaped notch is at least 8.90 mm deep and
21 has a rounded bottom with a maximum radius of 1.50 mm centered
22 about 5.05 mm from the front side of the cartridge; and the V-
23 shaped notch has sides that extend from the rounded bottom toward
24 the front side of the cartridge at an angle of $60 \text{ degrees} \pm 1$
25 degree.

12. The cartridge of Claim 11, wherein said first and second locating notches are positioned about 13.25 mm from the left side and about 9.60 mm from the right side of the cartridge, respectively.

13. The cartridge of Claim 11, wherein said rounded bottom of the V-shaped notch is centered about 13.80 mm from the right side of the cartridge.

14. The cartridge of Claim 12, wherein said rounded bottom of the V-shaped notch is centered about 13.80 mm from the right side of the cartridge.

15. The cartridge of Claim 12, wherein said bottom side includes a hub with a window for engagement with a spindle of a motor in the drive, and said window has a center positioned about 51.00 mm from the front side and about 55.70 mm from the left side of the cartridge.

16. The cartridge of Claim 14, wherein said bottom side includes a hub with a window for engagement with a spindle of a motor in the drive, and said window has a center positioned about 51.00 mm from the front side and about 55.70 mm from the left side of the cartridge.

1 17. The cartridge of Claim 11, wherein a rear portion of each
2 lateral side contains a recessed surface offset by about 1.8 mm
3 therefrom and extending forward from said rear side; and said
4 recessed surface further contains a gripping notch at least 4.75 mm
5 deep, extending at least 8.70 mm in height from said bottom side,
6 and extending about 6.00 mm in width from approximately 14 mm to
7 approximately 20 mm from said rear side of the cartridge.

8 18. The cartridge of Claim 17, wherein said sloped face does not
9 extend to said lateral sides of the cartridge.

10 19. The cartridge of Claim 18, wherein said sloped face extends at
11 least 67 mm.

12 20. The cartridge of Claim 18, further comprising a beveled corner
13 surface connecting said rear side to each of said lateral sides.

14 21. The cartridge of Claim 11, further comprising a leader block
15 assembly incorporated within an opening located between said left
16 and front sides of the cartridge.

17 22. The cartridge of Claim 11, further comprising a leader pin
18 assembly incorporated within an opening located between said left
19 and front sides of the cartridge.

23. The cartridge of Claim 16, wherein a rear portion of each lateral side contains a recessed surface offset by about 1.8 mm therefrom and extending forward from said rear side; and said recessed surface further contains a gripping notch at least 4.75 mm deep, extending at least 8.70 mm in height from said bottom side, and extending about 6.00 mm in width from approximately 14 mm to approximately 20 mm from said rear side of the cartridge.

24. The cartridge of Claim 23, wherein said sloped face does not extend to said lateral sides of the cartridge.

25. The cartridge of Claim 24, wherein said sloped face extends at least 67 mm.

26. The cartridge of Claim 24, further comprising a beveled corner surface connecting said rear side to each of said lateral sides.

27. The cartridge of Claim 26, further comprising a leader block assembly incorporated within an opening located between said left and front sides of the cartridge.

28. The cartridge of Claim 26, further comprising a leader pin assembly incorporated within an opening located between said left and front sides of the cartridge.